

## **Biology of *Spirama retorta* (Lepidoptera: Noctuidae), a new pest of *Acacia mangium* in Peninsular Malaysia**

### **ABSTRACT**

An outbreak of *Spirama retorta* (Lepidoptera: Noctuidae), affecting 800 ha of a one-year-old *Acacia mangium* plantation, occurred in May to October 1992 in Gunung Besaut Forest Reserve, Perak, Peninsular Malaysia. In the laboratory, more than 60% of larvae reared on *A. mangium* leaves reached adult stage. Development from egg to adult took 42 days through seven instars requiring 27 days. The moth was medium - sized, having red abdomen and an eyespot on its forewing. The female ( $x = 64.4$  mm), bigger than the male, had greyish-orange forewings with prominent eyespots. The male ( $x = 58.8$  mm) had dark brown to almost black forewings with less conspicuous eyespots. The life table parameters recorded from laboratory population were: the net reproductive rate ( $R_o$ ) of 203.2, the mean generation time ( $T_c$ ) of 43.3 days, the intrinsic rate of increase ( $r_m$ ) of 0.1 and the doubling time of 5.6 days. Results from biweekly sampling showed that the infestation, indicated by the number of trees with larvae, varied from 30% at the beginning of the study, rose to more than 60% in the fourth week and dropped to less than 10% at the end of the fourteenth week. Three tachinids, *Carcelia* sp., *Exorista* sp. and *Blepharella* sp., emerged from field collected larvae. Larval-pupal mortality due to parasitism was 5.6 - 43.3%. Predators, *Sycanus leucomesus* (Reduviidae), *Cantheconidea furcellata* (Pentatomidae), *Mallada basalis* (Chrysopidae) and *Vespa affinis indosinensis* (Vespidae) were observed feeding on the larvae.

**Keyword:** *Acacia mangium*; Outbreak; *Spirama retorta*